

BBNA Tribal Energy Efficiency & Conservation Block Grant Program

Administered by Alaska Building Science Network

Portage Creek Final Report



Community Summary

Fifteen (15) Portage Creek Village Council Tribal Members received energy efficient lighting upgrades and additional energy efficient technologies.

Retrofits Completed: August 2012

Village-Wide Lighting Retrofit Summary:

• Installed 192 LED A19 bulbs	
• Distributed 15 Energy Conservation Kits	
• Projected Annual Electrical Savings (kWh):	17,800
• Total Projected Annual Energy Cost Savings:	\$6,941.56¹
• Total village-wide In-kind contribution:	\$1,514
• Total project cost including In-kind contributions:	\$32,736
• Simple Payback (including In-kind contributions):	4.71 years

¹ kWh Rate [used to calculate electrical cost savings] for Lighting Measures (State of AK - AEA PCE Program Report FY 2011 avg.): \$0.39

15 Households LED A19 Bulbs

Lighting Retrofit Summary:



Materials Installed

LED A19 bulb – 7 watt

Quantity

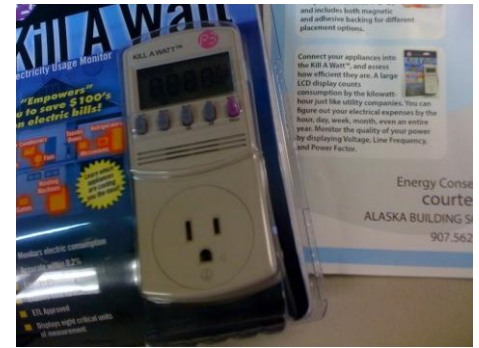
192

• Pre-retrofit energy use:	11.52 kW
• Post-retrofit energy use:	1.344 kW
• Energy savings projection:	10.176 kW
• Pre-retrofit to post retrofit energy reduction:	88 percent
• Estimated Annual Savings:	17,800 kWh

Hours/day (250 days/year)	Electrical Savings (\$)	Avoided Diesel (gal)	Avoided Diesel (\$)
4 Hours/day	\$3,966.60	674.35	\$1,739.83
7 Hours/day	\$6,941.56	1180.12	\$3,044.71
10 Hours/day	\$9,916.51	1685.88	\$3,044.71
Local Estimated Use	\$5,454.08	927.24	\$2,392.27

The **LED “A19”** screw-in style light bulb is among the latest technologies available for lighting energy efficiency. The bulb utilizes Light Emitting Diode (LED) technology which operates more efficiently than the standard Incandescent bulb or spiral-type Compact Fluorescent bulb (CFL). This “60 watt equivalent” LED A19 bulb uses **8 watts** to produce the same light output (lumens) as a **60 watt** incandescent bulb. This particular LED A19 also lasts up to 50,000 hours versus average 8,000 hours for a Compact Fluorescent bulb. In addition, this “outdoor rated” version will operate both in wet and cold weather conditions and will not struggle to turn on in winter.

Distribution of Energy Efficient Technologies



15 Energy Conservation Kits distributed to Ekuk Village Council member households

Conservation Kit Contents:

- 13 Watt Energy Star CFLs (Qty. 6)
- 18 Watt Energy Star CFLs (Qty. 6)
- LED Nightlights (Qty. 4)
- Bi-Metal Refrigerator/Freezer Thermometer (Qty. 2)
- Kill-a-Watt Meter (Qty. 1)
- Power Strips (Qty. 2)
- Showerhead (Chrome, 2.0 GPM, Qty. 1)
- 2.0 GPM Dual Swivel on/off (kitchen sink Aerator, Qty. 1)
- 1.0 GPM (bathroom sink Aerator, Qty. 1)
- Switch & Outlet Gaskets (Qty. 1)
- Window Pack (Qty. 1)
- Furnace Filter Whistle (Qty. 1)
- Weather stripping (Qty. 1)
- Rope Caulk (Qty. 1)
- Hot Water Tank Wrap (Qty. 1)
- Programmable Thermostat (Qty. 1)
- Plate Pal Wall Thermometer (Qty. 4)

Doors & Windows – purchased for two Portage Creek Village Council Tribal Members

Doors: (Pre-hung doors: SBS, DFS3014 - 3-0 4-5/8 IS FG SMTH DOOR, Qty.2)

Windows: (Notherm 3800 White Windows: 95x44.5, Qty. 1; 37x39, Qty. 1; 95.5x37.5, Qty. 1; 56.25x37.5; 94.375x53.25, Qty. 1; 53.75x37.5, Qty. 2)